Abstract of the disclosure

A retardation arrangement for converting an input radiation beam, incident from an input side of the retardation arrangement, into an output radiation beam which has over its cross section a spatial distribution of polarization states which can be influenced by the retardation arrangement and differs from the spatial distribution of polarization states of the radiation, is designed as a reflective retardation arrangement. A useful cross section of the retardation arrangement has a multiplicity of retardation zones of different retardation effect. Such a mirror arrangement having a retardation effect varying as a function of location can be used to compensate undesired fluctuations in the polarization state over the cross section of an input radiation beam and/or to set specific output polarization states, for example in order to set radial or tangential polarization.